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U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

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## LEAD IN JUNE 1997

Mine production, based upon the net quantity recovered in the smelting of concentrate, decreased by about 9% in June but was up by about 4% compared with production in June 1996. Primary and secondary refinery production decreased by 7% and 3%, respectively, in June, but were up by about 32% and 6%, respectively, compared with production in June 1996. Reported consumption increased by 3% in June.

According to *Platt's Metals Week* published quotations, the average North American producer price and London Metal Exchange (LME) cash price remained relatively stable in June, decreasing by 0.1% and 0.6%, respectively.

National Defense Stockpile cash disposal (sale) of lead in June 1997 was 1,700 metric tons (1,874 short tons). Sale of lead to date in fiscal year 1997 (October 1996 through June 1997) was 12,038 metric tons (13,270 short tons).

Teck Corp., Vancouver, BC, Canada, and Sumitomo Metal Mining, Tokyo, Japan, reached a basic agreement on June 16 to continue exploration for lead-zinc deposits in the Stone Boy region near Fairbanks, Alaska. Sumitomo Metal Mining Arizona (SMMA), the owner of Stone Boy, Inc., and Teck Corp. are currently in the process of finalizing the details of a joint venture to explore the 16,000-square-kilometer Stone Boy survey area during the period 1997 to 2000. A Sumitomo official indicated that SMMA had been conducting exploration work at Stone Boy since 1991, but that more drilling and field survey work would be required before any estimates of ore reserves could be obtained (Metal Bulletin, 1997a).

Ireland's Ivernia West and Minorco Lisheen, joint developers of the Lisheen zinc-lead mine in County Tipperary, Ireland, announced plans to begin construction at the mine following the recent receipt of final planning permission from the Tipperary County Council. The joint developers also noted that discussions had begun with the Department of Transport, Energy and Communications regarding the granting of a state mining lease. At full production, the Lisheen mining operation

was expected to yield 300,000 tons per year and 40,000 tons per year of zinc and lead concentrates, respectively, over a 13-year life span. (Mining Journal, 1997).

Australian miner Western Metals Ltd. recently acquired the remaining 40.1% interest in the Blendevale lead-zinc mining project in the Kimberley region of Western Australia from Acacia Resources Ltd., its joint venture partner in the project. Western, which has been managing the project throughout the joint venture, expects to begin production at Blendevale by mid-1998 (Metal Bulletin, 1997b). Further development of Western's Blendevale and Kapok deposits as well as the recent opening of the Goongewa Mine are expected to double the company's production to 120,000 tons per year of zinc and 50,000 tons per year of lead in concentrates by 1999 (Metal Bulletin, 1997c).

China's lead and zinc producer, Zhuzhou Smelter, Hunan Province, plans to decrease production of lead by about 20% from 90,000 tons to 70,000 tons annually. The action was taken as a result of low prices for lead on the international market. Conversely, Zhuzhou plans to increase zinc production by 50% annually, in response to the higher prices for zinc on the international market (Platt's Metals Week, 1997).

Farallon Resources Ltd., Vancouver, BC, Canada reported the discovery of three additional polymetallic sulfide deposits at its Campo Morado project in Mexico's Guerrero State. The new deposits, called Largo, Rey, and La Suriana, bring to five the number of polymetallic deposits currently at various stages of delineation on the Campo Morado property. The Largo and Rey deposits are west of the Naranjo and Reforma deposits and the La Suriana deposit is south of the latter deposits. Assay results for the new deposits from Farallon's drill-delineation program showed ore contents of up to 7.9% combined lead and zinc, and significant quantities of copper, gold, and silver (The Northern Miner, 1997).

## References Cited

- Metal Bulletin, 1997a, Teck, Sumitomo agree on Stone Boy exploration: Metal Bulletin, no. 8189, June 23, p. 7.
- 1997b, Western Metals acquires Blendevale from Acacia Resources: Metal Bulletin, no. 8183, June 2, p. 6.
- 1997c, Western Metals' output to double by 1999: Metal Bulletin, no. 8183, June 2, p. 5.
- Mining Journal, 1997, Lisheen construction starts this month: Mining Journal, v. 328, no. 8432, June 6, p. 442.
- Platt's Metals Week, 1997, Zhuzhou to up zinc, cut lead: Platt's Metals Week, v. 68, no. 23, June 9, p. 3.
- The Northern Miner, 1997, Campo Morado yields massive sulphide deposits: The Northern Miner, v. 83, no. 17, June 23, p. 12.

TABLE 1  
SALIENT LEAD STATISTICS IN THE UNITED STATES 1/

(Metric tons)

	1996		1997		
	Jan. - Dec. p/	Jan. - June	May	June	Jan. - June
Production:					
Mine (recoverable)	418,000	217,000	38,600	35,100	224,000
Primary refinery 2/	326,000	174,000	30,800 r/	28,700	179,000
Secondary refinery:					
Reported by smelters/refineries	1,010,000	493,000 r/	85,600	83,100	513,000
Estimated	16,100	9,010 r/	1,400	1,320	8,380
Recovered from copper-base scrap e/	15,000	7,500	1,250	1,250	7,500
Total secondary	1,040,000	509,000 r/	88,200	85,700	529,000
Stocks, end of period:					
Primary refineries 2/	XX	XX	15,000 r/	10,900	XX
Secondary smelters and consumers	XX	XX	56,500 r/	61,100	XX
Imports for consumption:					
Ore and concentrates (lead content)	6,570	2,890	732	NA	5,250 3/
Refined metal	268,000	123,000	17,600	NA	104,000 3/
Consumption:					
Reported	1,230,000	405,000	100,000 r/	103,000	612,000
Undistributed e/	454,000	248,000	37,000 r/	38,000	226,000
Total	1,680,000	653,000	137,000	141,000	839,000
Exports (lead content):					
Ore and concentrates	59,700	2,840	350	NA	6,930 3/
Materials excluding scrap	102,000	50,800	13,700	NA	42,300 3/
Ash and residues	19,400	6,510	860	NA	8,600 3/
TEL/TML preparations, based on lead compounds	3,200	434	244	NA	792 3/
Exports (gross weight): Scrap	85,300 4/	40,400 4/	5,290	NA	32,700 3/
Platt's Metals Week North American producer price (cents per pound)	48.83	48.50	45.94	45.90	47.17

e/ Estimated. p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices; may not add to totals shown.

2/ Data from American Bureau of Metal Statistics, Inc. (ABMS).

3/ Includes data for January - May only; June data not available at time of publication.

4/ Includes only non-battery scrap data.

TABLE 2  
MONTHLY AVERAGE LEAD PRICES

	North American producer price cents/lb	LME		Sterling exchange rate dollars/£
		\$/metric ton	£/metric ton	
1996:				
June	49.85	796.09	516.41	1.541590
Average Jan. - June	48.50	790.99	517.95	1.527444
Year average	48.83	773.87	495.56	1.561616
1997:				
March	47.85	694.09	431.23	1.609557
April	46.52	642.09	394.07	1.629323
May	45.94	618.23	378.78	1.632167
June	45.90	614.49	373.61	1.644743
Average Jan. - June	47.17	653.42	400.12	1.633323

Source: Platt's Metals Week.

TABLE 3  
MINE PRODUCTION OF RECOVERABLE LEAD IN THE UNITED STATES 1/

(Metric tons)

	1996 p/		1997		
	Year total	Jan. - June r/	May	June	Jan. - June
Missouri	387,000 2/	160,000	35,500 2/	32,100 2/	206,000 2/
Other States	30,800 3/	54,400 4/	3,150 3/	2,990 3/	18,100 3/
Total	418,000	215,000	38,600	35,100	224,000
Daily average 5/	1,140	1,180	1,250	1,170	1,240

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Alaska and Missouri combined to avoid disclosing company proprietary data.

3/ Includes Colorado, Idaho, Montana, and New York.

4/ Includes Alaska, Colorado, Idaho, Montana, and New York.

5/ Based on number of days in period without adjustment for Sundays or holidays.

TABLE 4  
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP IN JUNE 1997 1/

(Metric tons, gross weight)

Item	Stocks May 31, 1997	Net receipts	Consumption	Stocks June 30, 1997
Battery-lead	39,900	93,700	94,400	39,100
Soft lead	W	W	W	W
Drosses and residues	955	3,800	3,770	979
Other 2/	1,250	2,910	2,900	1,260
Total	42,100	100,000	101,000	41,300
Percent change from preceding month	--	-1.4	-1.2	-1.7

W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes solder, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap not elsewhere classified.

TABLE 5  
LEAD, TIN, AND ANTIMONY RECOVERED FROM LEAD-BASE  
SCRAP IN JUNE 1997 1/

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	40,600	--	--
Remelt lead	W	W	W
Antimonial lead	36,600	11	W
Other 2/	W	W	--
Total lead-base	83,100	36	586

W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Data are rounded to three significant digits.

2/ Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 6  
CONSUMPTION OF LEAD IN THE UNITED STATES 1/

(Metric tons, lead content)

Uses	1996		1997		
	Jan.-Dec. p/	Jan.- June	May	June	Jan.- June
<b>Metal products:</b>					
Ammunition-shot and bullets	37,800	22,500	3,620	6,100	27,100
Brass and bronze-billet and ingots	6,060	3,110	520	505	3,140
Cable covering-power and communication and calking lead-building construction	6,720	3,250	910	837	3,870
Casting metals	1,400	721	49	28	320
Pipes, traps, and other extruded products	(2/)	171	(2/)	(2/)	(2/)
Sheet lead	13,900	4,680	770	767	4,220
Solder	5,480	2,730	260	871	3,590
Storage batteries, including oxides	1,140,000	354,000	93,200	93,100	566,000
Terne metal, type metal, and other metal products 3/	3,830	3,770	164 r/	190	1,170
Total metal products	1,210,000	395,000	99,500 r/	102,000	609,000
Other oxides	(4/)	4,460	(4/)	(4/)	(4/)
Miscellaneous uses	13,600	5,790	433	379	3,110
Total reported	1,230,000	405,000	100,000 r/	103,000	612,000
Undistributed consumption e/	454,000	248,000	37,000 r/	38,000	226,000
Grand total	1,680,000	653,000	137,000	141,000	839,000

e/ Estimated. p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Withheld to avoid disclosing company proprietary data; included with "Sheet lead."

3/ Includes lead consumed in foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

4/ Withheld to avoid disclosing company proprietary data; included with "Miscellaneous uses."

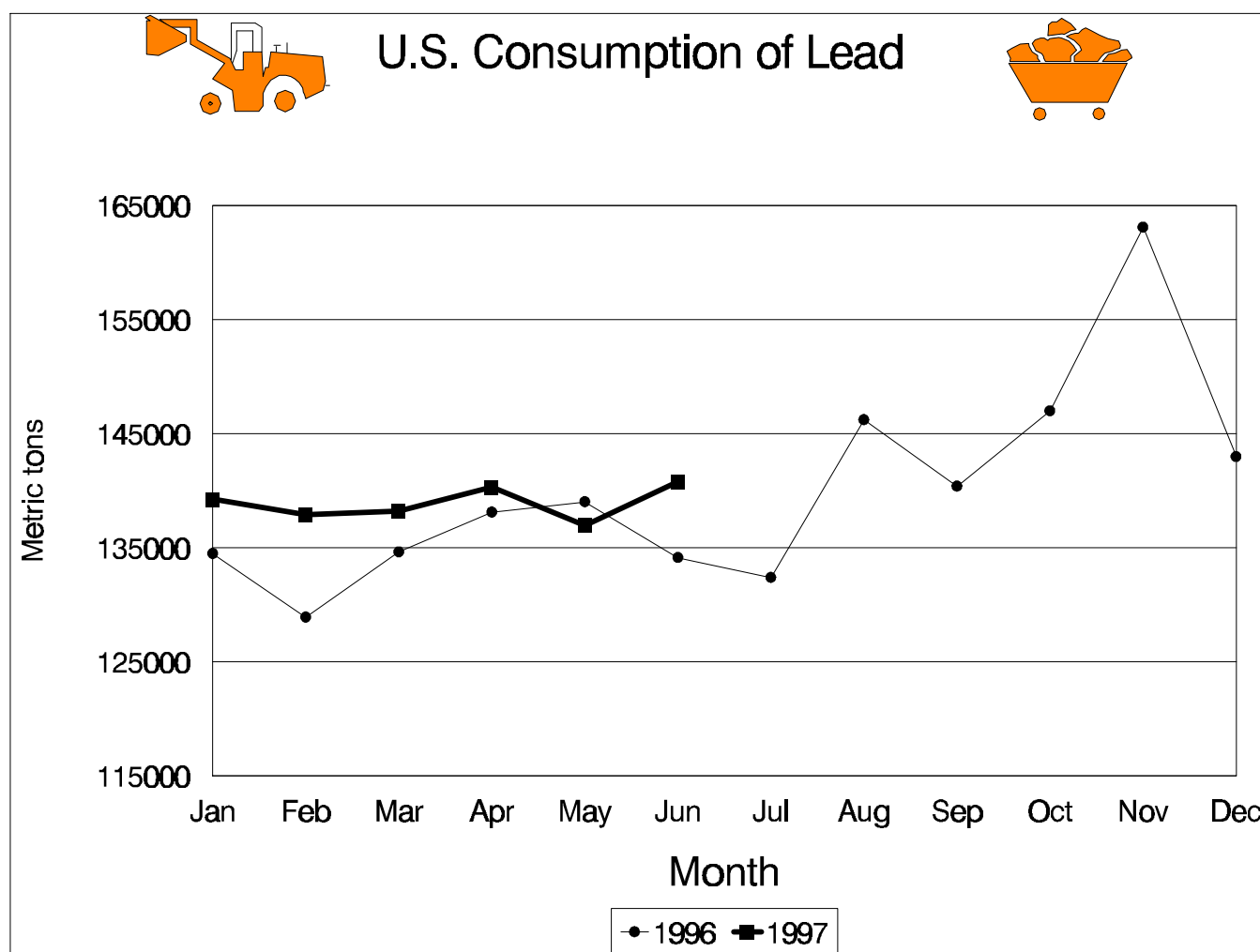


TABLE 7  
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS, AND  
CONSUMPTION OF LEAD IN JUNE 1997 1/

(Metric tons, lead content)

Type of material	Stocks May 31, 1997	Net receipts	Consumption	Stocks June 30, 1997
Soft lead	20,800	55,700	54,300	22,300
Antimonial lead	31,600 r/	32,600	29,400	34,700
Lead alloys	W	18,800	18,700	W
Copper-base scrap	W	420	420	W
Total	56,500 r/	107,000	103,000	61,100

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 8  
U.S. EXPORTS OF LEAD, BY CLASS 1/

(Metric tons)

	1996		1997		
	Year total	May	Apr.	May	Jan. - May
Lead content:					
Ore and concentrates	59,700	674	991	350	6,930
Materials excluding scrap	102,000	16,600	5,330	13,700	42,300
Ash and residues	19,400	1,530	1,730	860	8,600
TEL/TML preparations, based on lead compounds	3,200	37	24	244	792
Total	184,000	18,800	8,080	15,200	58,600
Gross weight: Scrap	85,300 2/	6,480 2/	5,360	5,290	32,700

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes only non-battery scrap data.

Source: Bureau of the Census.

TABLE 9  
U.S. IMPORTS OF LEAD BY TYPE OF MATERIALS AND BY COUNTRY OF ORIGIN 1/

(Metric tons, lead content)

Country of origin	General imports					Imports for consumption				
	1996		1997			1996		1997		
	Year total	Jan. - May	Apr.	May	Jan. - May	Year total	Jan. - May	Apr.	May	Jan. - May
Ore, matte, etc.:										
Bolivia	326	278	414	--	445	--	--	--	--	--
Canada	352,000	151,000	1,420	59	58,200	4,370	2,370	(2/)	53	53
Mexico	2,890	390	--	--	558	2,080	390	--	--	558
Peru	13,400	6,810	342	--	1,910	--	--	--	--	--
Other	133	122	--	450	4,410	122	122	--	--	3,960
Total	369,000	159,000	2,170	1,190	66,200	6,570	2,880	(2/)	732	5,250
Base bullion:										
Mexico	5	--	--	--	--	5	--	--	--	5
Total	5	--	--	--	--	5	--	--	--	5
Pigs and bars:										
Belgium	11	--	7	--	28	11	--	7	--	28
Canada	192,000	73,600	15,600	13,200	78,400	192,000	73,600	15,600	13,200	78,500
Germany	338	106	75	72	225	338	106	75	72	225
Mexico	56,900	23,900	4,680	3,860	21,200	56,900	23,900	4,680	3,860	21,200
Peru	17,100	9,190	500	500	2,700	17,100	9,190	500	500	2,700
United Arab Emirates	160	72	10	11	42	160	72	10	11	42
United Kingdom	19	--	--	--	--	19	--	--	--	--
Other	846	27	--	--	910	846	27	--	--	910
Total	267,000	107,000	20,800	17,600	103,000	268,000	107,000	20,800	17,600	104,000
Reclaimed scrap, including ash and residues	192	159	--	--	--	192	159	--	--	--
Grand total	636,000	266,000	23,000	18,800	170,000	274,000	110,000	20,800	18,300	109,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.